STATE OF ARIZONA

Joint Committee on Capital Review

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

R E V I S E D

JOINT COMMITTEE ON CAPITAL REVIEW
Thursday, July 21, 2005
1:30 p.m.
Senate Appropriations Room 109

MEETING NOTICE

- Call to Order

- Approval of Minutes of May 10, 2005.

- DIRECTOR'S REPORT (if necessary).

1. ARIZONA DEPARTMENT OF EMERGENCY AND MILITARY AFFAIRS - Consider Approval of Building Renovation.

2. ARIZONA GAME AND FISH DEPARTMENT - Consider Approval of Capital Project Funding Transfer and Review of Project Scope Changes.

3. DEPARTMENT OF JUVENILE CORRECTIONS / ARIZONA DEPARTMENT OF ADMINISTRATION - Review of Department of Juvenile Corrections Vocational Education Remodel.

4. ARIZONA DEPARTMENT OF TRANSPORTATION - Review of FY 2006 Construction Budget Operating Expenditure Plan.

5. SCHOOL FACILITIES BOARD - Review of New School Construction Report and New School Facilities Fund Litigation Account.

6. ARIZONA STATE SCHOOLS FOR THE DEAF AND THE BLIND - Review of Capital Projects.

7. ARIZONA DEPARTMENT OF ADMINISTRATION - Review of FY 2006 Building Renewal Allocation Plan.

(Continued)

8. NORTHERN ARIZONA UNIVERSITY - Review of Research Infrastructure Lease-Purchase Projects.

9. ARIZONA STATE UNIVERSITY
   A. Review of Infrastructure and Sewer Systems Bond Projects.
   B. Review of Revised Project Costs and Scopes.
   C. Review of Revised Scopes for Laboratory Renovations.

10. UNIVERSITY OF ARIZONA
    A. Review of New System Bond Capital Projects.
    B. Reports on Capital Project Contingency Allocations.

The Chairman reserves the right to set the order of the agenda.
07/13/05

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HOUSE OF REPRESENTATIVES

MINUTES OF THE MEETING
JOINT COMMITTEE ON CAPITAL REVIEW

Tuesday, May 10, 2005

The Chairman called the meeting to order at 8:40 a.m. Tuesday, May 10, 2005 in Senate Appropriations Room 109 and attendance was as follows:

Members:	Senator Burns, Chairman	Representative A. Aguirre
	Senator Bee	Representative Biggs
	Senator Cannell	Representative Boone
	Senator Giffords	Representative Brown
	Senator Johnson	Representative Lopes
Absent:	Senator L. Aguirre	Representative Pearce, Vice-Chairman
	Senator Gould	Representative Tully

Senator Burns moved the Committee approve the minutes of February 9 and 10 and February 22, 2005 as presented. The motion carried.

PINAL COMMUNITY COLLEGE DISTRICT – Review of Bond Projects

Mr. Jake Corey, JLBC Staff, presented the Pinal Community College District (PCCD) request that the Committee review its $435.2 million General Obligation (GO) bond proposal. The GO proceeds would be combined with $47.8 million from revenue bond proceeds for a total of $482.9 million. Proceeds would be used to fund construction and renovation projects to address student growth in the district. The bonds would be issued in four installments every five years, with the first issuance occurring in FY 2006.

There was no discussion on this item.

Representative Boone moved the Committee give a favorable review to the Pinal Community College District $435.2 million General Obligation (GO) bond proposal, with the provision that the district return to the Committee for review prior to each actual GO bond issuance. The motion carried.

YUMA-LA PAZ COMMUNITY COLLEGE DISTRICT – Review of General Obligation Bond Issuance

Mr. Jake Corey, JLBC Staff, presented the Yuma-La Paz Community College District request that the Committee review its proposed $20 million General Obligation (GO) bond issuance. The board was authorized by a November 2004 bond election to issue a total of $73.9 million in bonds. The board plans to issue $20 million in bonds now and the remaining $53.9 million in June 2006. Previously, the Committee gave a favorable review to the entire $73.9 million bond proposal, with the provision that the district return for Committee review prior to each actual bond issuance.

The district plans to issue a total of $20 million in bonds in FY 2005. Over a 25-year period, with an estimated interest rate of 5%, total interest payments would equal $15.2 million. Total debt service would be approximately $35.2 million.

There was no discussion on this item.

Representative Boone moved the Committee give a favorable review to the Yuma-La Paz Community College District proposed $20 million General Obligation bond issuance, with the provision that the district submit the remaining $53.9 million prior to issuing those bonds. The motion carried.

ARIZONA EXPOSITION & STATE FAIR BOARD – Review of FY 2005 Building Renewal Allocation Plan

Nick Klingerman, JLBC Staff, presented the Arizona Exposition & State Fair Board (AESF) request that the Committee review its FY 2005 Building Renewal allocation plan of $1,007,000 and that $240,400 from the appropriation be available for contingencies. AESF was appropriated a total of $1,247,400 for building renewal in FY 2005.

The 5 projects include security fencing replacement, asphalt reconstruction, Coliseum roof repair, light fixture replacement and underground cabling.

Senator Giffords asked what other activities will benefit from the building renewal projects. Don West, Deputy Director, AESF stated that the non-fair activities that will benefit include home and garden shows, gun shows, volunteer nurse's book sale, antique markets and herb shows. There are approximately 116 non-fair events per year in addition to the 18 days of the State Fair that will benefit from the projects.

Senator Cannell asked where the excess revenues go. Mr. Klingerman stated that the fair has their own fund so any excess revenues remain in the State Fair Fund.

Representative Boone moved that the Committee give a favorable review to the Arizona Exposition and State Fair (AESF) FY 2005 Building Renewal Allocation plan of $1,007,000 for the 5 submitted projects with the following provisions:

- *AESF be allowed to allocate $100,000 from the remaining $240,400 as a contingency amount if needed to complete the projects.*
- *AESF submit for Committee review an allocation plan for the remaining $140,400 if monies are to be used for new projects.*

The motion carried.

ARIZONA DEPARTMENT OF ADMINISTRATION – Review of Revised FY 2005 Building Renewal Allocation Plan

Jeremy Olsen, JLBC Staff, presented the Arizona Department of Administration request that the Committee review the revised FY 2005 Building Renewal allocation plan. The Committee had favorably reviewed the expenditure of $2,766,000 from this fund in previous meetings, leaving $734,000 unallocated. The department's request includes reallocating $200,000 from a $300,000 air handler building renewal project at a Department of Corrections facility. This $200,000 reallocation would increase the unallocated amount to $934,000. Of the $934,000, $812,000 would be allocated to the requested projects and the remaining $122,000 would be available for emergency projects (in addition to $665,000 previously authorized for emergency projects).

There was no discussion on this item.

Representative Boone moved that the Committee give a favorable review to the $812,000 revised building renewal request and $200,000 reallocation, with the provision that the department continue to report to JLBC Staff on allocations from the $787,000 available for emergency projects. The motion carried.

ARIZONA BOARD OF REGENTS – Report on Private Office Leases

Ms. Shelli Carol, JLBC Staff, presented the Arizona Board of Regents report for FY 2003 and FY 2004 private office leases that exceeded the average lease cost per square foot determined by the Lease Cost Review Board (LCRB). LCRB determined a $17.25 average private lease rate for FY 2003 and an $18.25 average private lease rate for FY 2004. Additionally, LCRB estimates the average per square foot cost for leasing privately owned space will remain at $18.25 through FY 2006 and FY 2007.

Of the 169 private leases approved by ABOR in FY 2003, 30 exceeded the $17.25 per square foot estimate for private office space. Of the 186 private leases approved by ABOR in FY 2004, 32 exceeded the $18.25 per square foot estimate for private office space.

The actual ABOR average lease rate in FY 2004 was around $16.70.

Senator Cannell asked if it would be better to build buildings instead of paying lease space in certain remote areas.

In response to Senator Cannell, Lorenzo Martinez, JLBC Staff, stated that some of the remote areas have historically had higher lease costs because rental space is limited and the demand for space may increase lease costs. Typically, the amount of space the state needs in remote areas is insufficient to make constructing a state building feasible.

This item is for information only and no Committee action is required.

Without objection the Committee adjourned at 9:00 a.m.

Respectfully submitted:

Jan Belisle, Secretary

Lorenzo Martinez, Assistant Director

Senator Bob Burns, Chairman

NOTE: A full tape recording of this meeting is available at the JLBC Staff Office, 1716 W. Adams.

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HOUSE OF REPRESENTATIVES

DATE: June 13, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Jeremy Olsen, Fiscal Analyst

SUBJECT: Arizona Department of Emergency and Military Affairs – Consider Approval of Building Renovation

Request

The Arizona Department of Emergency and Military Affairs (DEMA) requests Committee approval of the renovation of a fire station acquired from the City of Tempe, which the department will utilize as a readiness center. A.R.S. § 26-231 allows the Department of Emergency and Military Affairs to utilize monies deposited in the Armory Property Fund for the construction and capital improvement of national guard armories, subject to the approval of the JCCR.

Recommendation

JLBC Staff recommends approval of the use of up to $1,366,000 from the State Armory Property Fund for renovations to the Tempe fire station, with the provision that the department return for approval after defining the scope and estimated cost of the project.

Analysis

The department has arranged to exchange the Tempe Armory, which is located on 1.65 acres situated on the southeast corner of Stadium Drive and College Avenue, with the City of Tempe in exchange for a Fire Station which sits on 2.34 acres near Rural Road and University Avenue. The fire station will be converted into a new armory by the department, and the old armory will be conveyed by the City to a private developer. The department would also receive $1,366,000 from the exchange, which would be used to pay for the modifications to convert the fire station to a readiness center.

(Continued)

The Tempe armory was constructed in 1954 and is 5,964 square feet in size, and is currently vacant. The property also contains a vehicle storage building which was built in 1949, and is approximately 5,348 square feet in size. The fire station to be acquired was built in 1965 and is 15,956 square feet in size. The department intends to convert the fire station to a readiness center, which would house the 123rd Public Affairs detachment and the 108th Army band units when completed. These units have recently returned from active duty and will be housed in renovated readiness center. Currently both units are assigned space in armories which are over capacity.

The department plans to use the $1,366,000 received from the exchange to fund the renovations. The appraised value of the Tempe armory is $2,700,000, while the value of the fire station parcel is $1,334,000. The difference in the appraised value of the properties, $1,336,000, equals the cash payment to be received by the department. DEMA has not developed a detail scope or cost estimates for the project.

RS/JO:ym

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Joint Committee on Capital Review

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HOUSE OF
REPRESENTATIVES

TOM BOONE
CHAIRMAN 2006
AMANDA AGUIRRE
ANDY BIGGS
JACK A. BROWN
PHIL LOPES
RUSSELL K. PEARCE
STEPHEN TULLY

DATE: July 12, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Jeremy Olsen, Fiscal Analyst

SUBJECT: Arizona Game and Fish Deparment – Consider Approval of Capital Project Funding Transfer and Review of Project Scope Changes

Request

The Arizona Game and Fish Department (AGFD) request the Committee:
1) Approve a transfer of a FY 2003 allocation of $50,000 from the Game & Fish fund for the Deer Valley Paving project to the Pinetop Regional Office Paving project;
2) Review the reallocation of a FY 2005 allocation of $150,000 from the Game & Fish Capital Improvement fund for the Ben Avery safety berm project to the Ben Avery electrical/lighting project.

Committee review of capital projects is required pursuant to A.R.S. § 41-1252, and Committee approval of transfers between capital projects is required pursuant to A.R.S. 35-173.

Recommendation

The JLBC Staff recommends:
1) The Committee approve the transfer of $48,500 from the Deer Valley Headquarters paving project to the Pinetop regional office paving project. Any unexpended monies should revert to the fund from which they were appropriated at completion of these projects.
2) The Committee favorably review the reallocation of $146,000 from the Game & Fish Fund for the Ben Avery Shooting Range electrical/lighting project.

(Continued)

Analysis

Pinetop Regional Office Paving
Laws 2004, Chapter 276 appropriated $50,000 from the Game & Fish Capital Improvement Fund in FY 2005 for a paving project at the department's Deer Valley Headquarters. Since that time, AGFD has begun evaluating the feasibility of relocating its headquarters building to property adjacent to the Ben Avery shooting range. Given the uncertainty regarding the headquarters facility, the department is requesting the funding be transferred to the Pinetop paving project, which was authorized in FY 2004 and was favorably reviewed by the Committee in November 2003. The $310,000 allocated for a new warehouse and paving was insufficient to complete the paving.

The Department requires additional funding to complete the paving, and has received a bid of $48,500. This would bring total costs of the Pinetop warehouse project to $358,500. The additional funding would pave the entry and exit driveways at the Pinetop regional office with 3 inches on a 6 inch asphalt base. Given that the amount represents the low bid, JLBC Staff recommends a favorable review. A.R.S. § 35-173 requires Committee approval of funding transfers between capital projects.

Ben Avery Shooting Range Facility Improvements
Laws 2001, Chapter 237 appropriated $170,000 in each of FY 2002 and FY 2003 from the Game and Fish Fund for facilities improvements at the Ben Avery Shooting Range (BASR) and two wildlife areas. The department was able to construct safety berms at the BASR with materials donated by developers from a nearby project (Anthem). A.R.S. § 41-1252 requires Committee review of capital projects.

Of the original appropriation, the department has $146,000 remaining and is requesting Committee review to reallocate funding for a project which would provide lighting and electrical system upgrades at the main shooting range. Total costs for the project are estimated to be $270,000. The additional $124,000 required to complete the project will come from a FY 2005 building renewal allocation of $80,000, and the remaining $44,000 would be provided from FY 2006 building renewal funds. The department is required to submit a building renewal allocation plan to the Committee for review, and will submit its FY 2006 building renewal allocation plan at a future date.

The department received 3 bids to complete the electrical system upgrade. The low bid represented an amount of $218,835. Combined with $34,200 which the department has used to purchase equipment and $16,965 set aside as a contingency, the total cost of the project will be $270,000. The table below shows the expenditure breakdown of the project. Given that the amount represents the low bid, JLBC Staff recommends a favorable review.

Category	Expenditure Plan
Labor	$118,383
Contractor Materials	88,065
Department Materials	34,200
Contingency	16,965
Tax	12,387
Total	**$270,000**

RS/JO:ym

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HOUSE OF REPRESENTATIVES

DATE: June 22, 2005

TO: Senator Robert Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Kimberly Chelberg, Fiscal Analyst

SUBJECT: Department of Juvenile Corrections / Arizona Department of Administration – Review of Department of Juvenile Corrections Vocational Education Remodel.

Request

At its February 2005 meeting, the Committee considered a Department of Juvenile Corrections (DJC) request to use FY 2005 operating budget monies to convert a housing unit to a vocational education unit in order to address a federal audit. The Committee referred the item to the full Legislature to be considered during the budget process for FY 2006. As a result, the General Appropriations Act (Laws 2005, Chapter 286) includes a footnote authorizing the Department of Juvenile Corrections (DJC) to use $6,674,800 of its FY 2006 operating budget to address operating and capital issues related to the federal audit.

DJC is requesting Committee review of its proposal to use $489,500 to convert an existing Black Canyon housing unit to a vocational education unit.

Recommendation

The JLBC Staff recommends a favorable review of the request with the provision that any future request to use FY 2006 operating budget monies for audit-related capital projects include a comprehensive plan of prioritized projects.

Analysis

In FY 2004, DJC was investigated by the U.S. Department of Justice for violations of the Civil Rights of Institutionalized Persons Act (CRIPA), and signed a Memorandum of Agreement on September 15, 2004. This agreement requires the DJC to improve certain programs and facilities, including suicide prevention, special education, medical care, and mental health care. DJC is authorized to use to use $6,674,800 of its FY 2006 operating budget to address operating and capital issues related to the federal audit.

(Continued)

The Department of Juvenile Corrections is proposing to remodel a building at the Black Canyon Girls School for an expanded educational program, which will offer instruction in computer training and repair, cosmetology, and culinary arts. The building is currently closed as a result of a reduced population, but contains space for 24 beds.

DJC maintains that the Black Canyon project addresses the federal audit in that as special education programs and instructors are added, additional space will be required for classes to maintain an 8-to-1 student-teacher ratio. As further justification, DJC cites the CRIPA consultant's First Semi-Annual Report, which notes the potential need for facility modifications if new vocational education electives are added.

Of the entire 6,400 square foot building, 2,470 square feet would be remodeled at a direct construction cost of $332,200, or $134 per square foot. Total project costs equate to $198 per square foot. The project includes $80,000 in equipment costs necessary for the kitchen component of the project. The costs appear reasonable given that the scope of renovations includes extensive plumbing and electrical system upgrades and expansions. Construction also includes demolition of existing dorm space and reconstruction to meet the needs of the proposed project.

Estimated costs for the project components are listed in *Table 1*.

Table 1

Category	Educational Space
Professional Fees	$ 16,800
Construction Services	332,200
Equipment	80,000
Project Support	23,500
Contingency	37,000
Total	**$489,500**

RS/KC:ym

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HOUSE OF REPRESENTATIVES

DATE: June 21, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Bob Hull, Principal Research/Fiscal Analyst

SUBJECT: Arizona Department of Transportation - Review of FY 2006 Construction Budget Operating Expenditure Plan

Request

In compliance with a Capital Outlay Bill footnote, the Arizona Department of Transportation (ADOT) requests that the Committee review its FY 2006 highway construction budget expenditure plan for Professional & Outside Services (contracted consultants).

Recommendation

The JLBC Staff recommends:

1. A favorable review of ADOT's $97 million Professional & Outside Services expenditure plan for FY 2006.
2. Adoption of the traffic congestion performance measures, with the stipulation that ADOT report on these performance measures as part of next year's Committee review.

In summary, the Staff has recommended a favorable review as the consultants' budget remains in line with previous years. It remains difficult, however, to measure the efficiency of these expenditures. The "traffic congestion" measures have been useful in identifying the targets for future improvements. ADOT is to report on all Maricopa County state highway segments that are "over capacity" for ½ hour or longer along with the department's Executive Summary of the 5-Year Transportation Facilities Construction Program for FY 2006 - FY 2010, which is due by July 31, 2005. More detailed "over capacity" information is not available for the Tucson area.

Analysis

ADOT's approved operating budget, in the General Appropriation Act (Laws 2005, Chapter 286), includes $54 million and 616 FTE Positions from the State Highway Fund in FY 2006 for field administration, engineering, and oversight on highway construction projects. Additional monies for consulting services in the capital budget allow ADOT the flexibility to handle any interim changes in the level of funding for highway construction.

The Capital Outlay Bill appropriated $204 million from the State Highway Fund to ADOT for highway construction in FY 2006. Of the $204 million, ADOT plans to expend $97 million for capital construction consultant services. ADOT's projected $97 million is $(8) million less than their planned expenditures of $105 million in FY 2005. Part of the $(8) million decrease reflects the reallocation of $2.7 million from Professional and Outside Services in the capital budget to ADOT's operating budget for a 5% salary increase in FY 2006 for participants in ADOT's engineering pay plan.

The following table shows how ADOT's actual expenditures for construction consultant services have varied from the department's planned dollar amounts for the past several fiscal years. It is difficult to evaluate Professional and Outside Services and whether resources are being used efficiently.

ADOT's Construction Budget Professional and Outside Services Expenditure Plan

	Expenditures		
FY	**Plan**	**Actual**	**Over/Under Plan**
2006	$97,000,000	-	-
2005	105,000,000	-	-
2004	105,000,000	$82,000,000	($23,000,000)
2003	99,000,000	96,000,000	(3,000,000)
2002	99,000,000	111,000,000	12,000,000
2001	105,000,000	93,000,000	(12,000,000)

Performance Measures

Last year the Committee adopted the following performance measures, which describe how ADOT's 5-year plan addresses some of the state's most crowded roadways. All the listed "over capacity" highway segments have some action in the 5-Year Plan, which was approved by the State Transportation Board on June 17, 2005. However, ADOT's definition of "over capacity" highway segments only addresses those segments that are "over capacity" for 3 hours during either the morning or afternoon commute for the Phoenix and Tucson areas

The Committee asked ADOT, at its September 21, 2004 meeting, to provide additional information on all Maricopa County state highway segments that are "over capacity" for ½ hour or longer along with the department's Executive Summary of the 5-Year Transportation Facilities Construction Program for FY 2006 - FY 2010, which is due by July 31, 2005. ADOT reports that more detailed "over capacity" information is not available for the Tucson area.

PHOENIX AREA	FY 2003 Actual	FY 2004 Actual	FY 2006 Estimate
• Percent of state highway system with traffic volume over 100% of capacity during 3 hours of the morning or afternoon commute in Phoenix Metro area	14	14	14

Phoenix Metro Area Highway Segments Over 100% of Capacity During Peak Driving Periods

Action in 5-Year Plan	Route	Segment	ADOT Action
Yes	I-10	Agua Fria - I-17	General purpose lanes; completion FY 08
Yes	I-10	Baseline Rd - 40th St	Collector distributor roads; completion FY 11
Yes	I-17	Carefree Hwy - Loop 101	HOV/general purpose lanes; completion FY 09
Yes	US 60 (Grand Ave)	I-10 - Loop 202	8 traffic interchanges; 5 done; completion FY 06
Yes	US 60 (Grand Ave)	Loop 303 - Loop 101	General purpose lanes; completion FY 10
Yes	US 60 (Superstition)	I-10 - Loop 101	General purpose lanes; completion FY 11
Yes	SR 51	Loop 101 - Shea Blvd	HOV/ramp; completion FY 09
Yes	Loop 101	Princess Dr - Loop 202	HOV lanes; completion FY 09
Yes	Loop 202	Rural Rd - Loop 101	General purpose lanes; completion FY 10
Completed Projects			
	I-10	Baseline - 16th St	Design concept report completed. Overall project expanded to encompass collector distributor roads for Baseline Rd - 40th St in current 5-Year Plan with completion in FY 11.
	SR 51	Northern - Thomas	HOV lanes Added

TUCSON AREA	FY 2003 Actual	FY 2004 Actual	FY 2006 Estimate
• Percent of state highway system with traffic volume over 100% of capacity during 3 hours of the morning or afternoon commute in Tucson Metro area	10	10	10

Tucson Metro Area Highway Segments Over 100% of Capacity During Peak Driving Periods

Action in 5-Year Plan	Route	Segment	ADOT Action
Yes	I-10	Prince Rd - 25th Ave	Widening project; completion FY 08
Yes	I-10	Ruthruaff - Prince Rd	Widening from 6 to 8 lanes; completion FY 11
Yes	Oracle Rd	Calle Concordia - Tangerine	Widening from 4 to 6 lanes; completion FY 06
Yes	Oracle Rd	Ina Rd - River Rd	Add shoulders; completion FY 05

BALANCE OF STATE	FY 2003 Actual	FY 2004 Actual	FY 2006 Estimate
• Percent of state highway system with traffic volume over 100% of capacity in balance of state	1	1	1

State Highway Segments Over 100% of Capacity in Balance of State

Action in 5-Year Plan	Route	Segment	ADOT Action
Yes	SR 195	Yuma (MP 12 - 12.9)	Design area service highway; completion FY 08
Yes	US 93	Hoover Dam Bypass (MP 1.7 - 16.1)	Widen from 2 to 4 lanes; start FY 10
Yes	SR 179	I-17 - Sedona (MP 306.2 - 307)	Needs study; completion FY 09
Completed Projects			
	SR 95	S. of Bullhead City (MP 236.2 - 242.8)	Expanded to 4 lanes
	US 93	Hoover Dam Bypass (MP 0 – 1.7)	South bridge approach done. Project in current 5-Year Plan is to widen 14.4 miles leading to the south approach. Nevada is near completion on North bridge approach. New bridge is totally federally funded with completion in 2008.

MP - Mile post. SA – Alternate route. SR - State route. SB - Business route.

RS/BH:ym

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HOUSE OF REPRESENTATIVES

DATE: July 13, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Jake Corey, Senior Fiscal Analyst

SUBJECT: School Facilities Board - Review of New School Construction Report and New School Facilities Fund Litigation Account

Request

Pursuant to A.R.S. § 15-2002, the School Facilities Board (SFB) requests the Committee review its demographic assumptions, proposed construction schedule, and new school construction cost estimates for FY 2006. The Committee previously heard this item at its December 20, 2004 meeting, but did not take action on the item as SFB had not provided all the required information at that time.

In addition, pursuant to A.R.S. § 15-2041, the Committee is required to conduct an annual review of the New School Facilities Fund Litigation Account, including the costs associated with current and potential litigation.

Recommendation

The JLBC Staff recommends a favorable review of the board report on New School Construction, with the following provisions:

- The board report back to the Committee on actual FY 2006 expenditures for Emergency Deficiencies. The board expects to spend $6.5 million for Emergency Deficiencies in FY 2006.
- The board report back to the Committee after determining how it will allocate $4 million in funding provided in FY 2006 for Full-Day Kindergarten capital grants.

The board estimates that it will oversee approximately 105 new school construction projects in FY 2006 and that it will spend $386.5 million in that year.

The JLBC Staff recommends a favorable review of the board report on the Litigation Account. The account is to be used to pay the litigation expenses when SFB pursues the recovery of damages for design or construction defects. To date, the board has not made any expenditures from the account.

Analysis

New School Construction Report

Demographic Assumptions

The SFB bases its demographic assumptions on its analysis of the school district forecasts of Average Daily Membership (ADM), included in the Capital Plans submitted by districts to the board. To conduct the analysis, SFB uses state population data, grade progression estimates, historical ADM growth, and, if applicable, residential housing growth. Analysis of student enrollment growth is performed on a district by district basis.

For districts that submitted a Capital Plan to the board, SFB expects enrollment to grow at a higher rate in FY 2005 and FY 2006 than in FY 2004. The board expects enrollment growth to be 6.1% in FY 2005 and 6.6% in FY 2006. Actual enrollment growth for the same districts in FY 2004 was 4.8%.

For FY 2006, within Maricopa County SFB expects growth of approximately 7.6% in the southeastern portion of the county, including the cities of Chandler and Gilbert. In the northern part of the county, including Deer Valley, Cave Creek, and Scottsdale, the board expects growth of about 3.9%. In the western and southern districts of Phoenix, including Tolleson, the board expects growth of 5.4%. In the districts outlying the western edge of Phoenix, including Dysart, Litchfield, Avondale, Agua Fria, Buckeye, and Saddle Mountain, SFB expects growth of 13.1%.

In the other areas of the state, the board expects growth of 12.7% in Pinal County, 4.0% in Yuma County, 3.4% in Southern Arizona, and 4.2% in Northern Arizona.

Construction Schedule

The board has a total of 77 construction projects approved prior to FY 2005 that it expects to oversee in FY 2006. Of the total, 63 are on-going projects that will be completed in FY 2006, 2 are on-going projects that will be completed after FY 2006, and 12 are projects that will begin construction in FY 2006.

In addition to the projects approved in prior years, the board approved 28 projects in FY 2005. Most of these projects are expected to begin construction in FY 2006.

Including both projects approved in prior years and projects approved in FY 2005, therefore, the board may oversee up to 105 construction projections in FY 2006.

Cost Estimates

The board estimates spending a total of $386.5 million in FY 2006. The table below provides a summary of the board's estimated expenditures.

Expenditures	
Construction – FY 04 Lease-Purchase Projects	$ 11.8 M
Construction – FY 05 Lease-Purchase Projects	82.4 M
Construction – Cash Projects	236.9 M
Land	30.0 M
Architecture & Engineering	15.0 M
Emergency Deficiencies	6.5 M
Full-Day Kindergarten	4.0 M
TOTAL	**$386.5 M**

Of the total $386.5 million expected to be spent in FY 2006, the board expects to incur the following costs:

- $11.8 million for 22 on-going construction projects included in the board's FY 2004 lease-purchase agreement. These projects are all expected to be completed in FY 2006. *(See Attachment #1.)*
- $82.4 million for 32 on-going construction projects included in the board's FY 2005 lease-purchase agreement. These projects are all expected to be completed in FY 2006. *(See Attachment #2.)*
- $236.9 million for construction projects to be paid for with cash. Of this total, the board will allocate:
    - $11.6 million for projects included as part of a prior year lease-purchase agreement. Due to cost increases, the funding provided from lease-purchase proceeds is insufficient to complete these projects. The board, therefore, will supplement these projects with cash funding.
    - $165.8 million for 23 projects approved prior to FY 2005. The estimate is based on prior year cash flow trends. *(See Attachment #3.)*
    - $59.5 million for 28 projects approved in FY 2005. The board approved a total of $235.3 million of projects in FY 2005. Based on prior year trends, the board expects to spend 25% of the total amount, or $59.5 million, in FY 2006. *(See Attachments #4 & #5.)*
- $30.0 million for land. The estimate is based on prior year expenditures.
- $15.0 million for architecture and engineering fees. Once the board approves a project, it immediately distributes 5% of the total cost of the project to the school district. Based on a rough estimate of $300 million of approvals in FY 2006, the board would distribute $15.0 million for these fees ($300 M * 5% = $15 M).
- $6.5 million for Emergency Deficiencies Correction projects. The estimate is based on outstanding approved projects that have yet to receive funding.
- $4.0 million for Full-Day Kindergarten capital grants. Of the $250.0 million in cash provided to the New School Facilities fund in FY 2006, Laws 2005, Chapter 287 authorizes the board to use up to $4.0 million for these grants.

To finance the projected $386.5 million in expenditures, the board expects to use lease-purchase proceeds remaining from prior years and new cash funding. The table below provides a summary of the board's estimated financing.

Financing	FY 2006
FY 04 Lease-Purchase Proceeds ($250 M) [1/]	$ 11.8 M
FY 05 Lease-Purchase Proceeds ($250 M) [1/]	82.4 M
Transfer From Treasurer	250.0 M
New School Facilities Fund	42.3 M
TOTAL	**$386.5 M**

1/ Amount in parentheses equals original issuance.

Of the total $386.5 million amount, the board expects to allocate funding from the following revenue sources:

- $11.8 million in lease-purchase proceeds from the FY 2004 lease-purchase agreement. The board expects to spend all remaining proceeds in FY 2006.
- $82.4 million in lease-purchase proceeds from the FY 2005 lease-purchase agreement. The board expects to have an FY 2006 ending balance of $7.6 million.
- $250 million in cash provided in FY 2006. Laws 2005, Chapter 287 directed the Treasurer to transfer this amount from the General Fund to the New School Facilities Fund in FY 2006.
- $42.3 million in cash from the New School Facilities Fund balance. The estimated FY 2006 beginning fund balance is $63.9 million. Allocating $42.3 million for FY 2006 expenditures, therefore, would leave the fund with an ending FY 2006 balance of $21.6 million.

Including $7.6 million in lease-purchase proceeds and $21.6 million in cash, the board expects an FY 2006 total ending balance of $29.2 million. In addition, Laws 2005, Chapter 287 appropriated $50 million to the New School Facilities Fund in FY 2007. Prior to any additional funding that may be provided, therefore, the board will have $71.6 million available in FY 2007.

New School Facilities Fund Litigation Account

A.R.S. § 15-2041 establishes a Litigation Account within the New School Facilities Fund to be used for litigation expenses associated with the recovery of damages for correcting deficiencies that were due to defects in the original design or construction of the facility. Any monies recovered as damages are to be used to offset the debt service on bonds issued to pay for the costs of the Deficiencies Correction Program.

To date SFB has not made any expenditures from the account and there is currently no money in the account. The board is currently attempting to recover costs associated with architect and contractor mistakes that occurred while correcting deficiencies, but has not yet begun to pursue cost recovery for errors in the original construction that created a deficiency. *(See Attachment #6.)*

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STATE OF ARIZONA

Joint Committee on Capital Review

STATE SENATE

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

HOUSE OF REPRESENTATIVES

DATE: July 12, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Nick Klingerman, Assistant Fiscal Analyst

SUBJECT: Arizona State Schools for the Deaf and the Blind – Review of Capital Projects

Request

Laws 2005, Chapter 298 appropriated $2,000,000 from the General Fund in FY 2006 to the Arizona State Schools for the Deaf and the Blind (ASDB) for capital and building renewal projects, and required ASDB to submit an expenditure plan to JCCR for review. ASDB requests the Committee review its allocation plan for the $2,000,000.

Recommendation

The Committee has at least the following options:

1) A favorable review of:
   a. Tucson Campus Projects
   b. Phoenix Day School Campus projects

The Tucson projects would fund foundation, carpet and school bell repairs. The Phoenix projects include $967,300 for modular classrooms that would add space to meet short term needs for the coming school year. Another $756,100 would replace the cafeteria's evaporative cooling with air conditioning and make other repairs.

2) An unfavorable review of all or some of the projects.

While project costs appear reasonable, there is a larger question of the future of the Phoenix Campus. There has been recent interest in determining whether other sites or facilities, such as closed schools, are available as an alternative to investing in upgrades at the Phoenix Campus. The proposed revisions may not be cost efficient if the campus is moved or divided in satellite sites.

(Continued)

ASDB is in the process of developing a master plan for the Phoenix Campus, which it hopes to have completed by the end of this year. With either a favorable or unfavorable review, JLBC Staff recommends that ASDB submit a plan by January 1, 2006 that includes different options for the use of the Phoenix Campus as well as the use of satellite programs, Co-Op programs, and any alternative strategies.

Analysis

Background
ASDB currently operates two central campuses, one in Tucson that consists of 34 buildings and one in Phoenix that consists of 20 buildings. In a report presented to the Committee on December 2, 2004, the Schools Facilities Board (SFB) estimated that the minimum space per student at ASDB should be 875 square feet. This amount considers classrooms, libraries, physical education areas, administrative space, auditoriums and other types of space. SFB set the square foot guidelines relative to schools in other states that are similar to ASDB. The requirements set by SFB for traditional schools are between 90 and 134 square feet per student.

SFB estimated that ASDB would require an additional 198,906 square feet at the Phoenix Campus at a cost of $22.2 million, and an additional 45,636 square feet at the Tucson Campus at a cost of $5.1 million to accommodate the estimated student population in FY 2006.

Enrollment at the Phoenix and Tucson Campuses has remained steady. Enrollment at the Phoenix Campus averaged 274 students in FY 2000 and 336 students in FY 2005 while enrollment at the Tucson campus averaged 290 students in FY 2000 and 301 students in FY 2005. All enrollment growth at both campuses is from the preschool program. ASDB also has Co-Op and satellite programs that provide services to students at schools that are closer to the student's home than the Phoenix or Tucson Campuses. In FY 2005, the satellite program averaged 50 students. The Co-Op program has grown from an average of 680 students in FY 2000 students to an average of 1,130 students in FY 2005, a 67% increase.

Project Overview
The agency has proposed an expenditure plan for the $2,000,000 appropriation that consists of 7 projects. Of the 7 projects, 4 are at the Phoenix Campus, 2 are at the Tucson Campus, and 1 of the projects is for both campuses. The following table displays the requested allocation for each project:

Project	Campus	Allocation
Modular Classrooms	Phoenix	$ 967,300
Cafeteria Renovations	Phoenix	756,100
Cafeteria Foundation Repair	Tucson	115,800
Carpet Replacement	Phoenix and Tucson	72,200
Library Lighting	Phoenix	62,300
School Bell System Replacement	Tucson	27,500
Fire Alarm Installation	Phoenix	6,800
Total		**$2,008,000**

Modular Classrooms
The Phoenix Campus currently has 109,696 square feet of building space and 336 students. This amounts to 326 square feet per student, which assuming SFB included preschool students in their calculation, is 549 square feet lower than the SFB guidelines of 875 square feet per student.

(Continued)

ASDB has proposed installing 8,400 square feet of new classroom space using modular classrooms in order begin addressing the SFB guidelines. With the additional 8,400 square feet of space, ASDB will have 351 square feet per student. ASDB has requested $967,300 or $115.15 per square foot to construct the modular classrooms. The costs appear reasonable based on the prior costs for similar construction projects.

In recent discussions on how to address long-term needs for the Phoenix Campus, the possibility of finding alternative facilities, such as closed schools, has been raised. A recent tour of a closed school in south Phoenix indicated that additional research into this option may have merit; however, any costs related to pursuing these types of options would have to be weighed against costs to provide upgrades at the Phoenix Campus.

Phoenix Campus Cafeteria Renovations
ASDB has proposed the following projects to renovate the cafeteria at the Phoenix Campus:

Project	Cost
Installation of Heating, Ventilation and Air Conditioning (HVAC) System	$635,000
Boiler and Tank Replacement	23,800
Install Food Service Lines	51,000
Replace Electrical Panel	31,800
Install Drop Ceiling	14,000
Fire Permit	500
Total	**$756,100**

The cafeteria at the Phoenix Campus does not have an air conditioner, and is cooled by 4 evaporative coolers. Due to the installation of the drop ceiling, the vents for the HVAC system will need to be extended. ASDB has requested $635,000 to install air conditioning units and extend the vents.

As a result of replacing the evaporative coolers, ASDB expects to replace the electrical panel. The current panel is over 30 years old. Replacement parts are no longer made for the panel. ASDB requests $31,800 to replace the electrical panel.

The Cafeteria is not currently equipped with food service lines. ASDB has used tables to function as the food service line; however, the tables cannot adequately accommodate the food service equipment. ASDB has proposed installing a permanent food service line to improve the cafeterias functionality. ASDB has requested $51,000 for this project.

Tucson Campus – Cafeteria Foundation Repair
According to ADOA, the foundation of the Cafeteria at the Tucson campus, built in 1975, was not compacted correctly during construction. The foundation has sunk between 3 to 6 inches in some locations. As a result, water drains towards the foundation of the building and has contributed to sewer line damage. ASDB requests $115,800 to repair the foundation of the Cafeteria.

Carpet Replacement
ASDB proposes replacing the carpeting in 3 dormitories at the Tucson campus and 2 classrooms at the Phoenix Campus. The carpet began fraying and is being duct taped in spots to prevent students from tripping. ASDB requests a total of $33,300 to replace 922 square yards of carpeting and to remove asbestos, a cost of $36.12 per square yard, at Tucson Campus. ASDB is requesting $21,500

(Continued)

to replace the 950 square yards of carpet of $22.63 per square yard at the Phoenix Campus. In total the project will cost $54,800 or $29.27 per square yard.

ASDB has also proposed replacing 655 square yards of carpeting in the Cafeteria at the Tucson campus with a vinyl floor. The carpeting in the cafeteria is 15 years old. ASDB has requested $17,400 or $26.56 per square yard to replace the flooring in the cafeteria.

Library Lighting

ASDB requests $62,300 to replace the lighting levels in the library at the Phoenix Campus. The cost estimate was provided by the SFB as part of a deficiency corrections report to the Committee on March 21, 2003.

Tucson Campus – Replace School Bell System

The school bell system at the Tucson Campus is 15 years old, is no longer being serviced by the manufacturer, and is no longer working. ASDB proposes the purchase of software that will allow the school to use the existing phone system as school bells. ASDB is requesting $27,500 for the software.

Phoenix Campus – Fire Alarm Installation

The student health center at the Phoenix Campus is not connected to the campus wide fire alarm system. The building is currently equipped with smoke detectors; however, deaf students and employees may not be aware the smoke detector had been activated. ASDB proposes installing a fire alarm in the student health center that has an audible alarm and also features lights as a warning method. This system would be connected to the campus wide system. ASDB has requested $6,800 for the project.

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STATE OF ARIZONA

Joint Committee on Capital Review

STATE SENATE

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

HOUSE OF REPRESENTATIVES

DATE: July 21, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Lorenzo Martinez, Assistant Director
Tyler Palmer, Fiscal Analyst

SUBJECT: Revised: Arizona Department of Administration – Review of FY 2006 Building Renewal Allocation Plan

Request

Laws 1986, Chapter 85 established the Joint Committee on Capital Review and charged it with developing a Building Renewal Formula to guide the Legislature in appropriating monies for the maintenance and repair of state buildings. A.R.S. § 41-1252 requires Committee review of expenditure plans for building renewal monies. The Arizona Department of Administration (ADOA) requests Committee review of the FY 2006 Building Renewal Allocation Plan for its $3.4 million Capital Outlay Stabilization Fund (COSF) appropriation.

Recommendation

JLBC Staff recommends a favorable review for only $975,000 of the request with the following provisions:

- The $975,000 represents $893,000 for 7 projects detailed in the ADOA Building Renewal Allocation Plan, plus $82,000 for emergency projects. The 7 projects include:
  - $547,000 for Department of Corrections roof replacement at ASPC-Douglas
  - $112,000 for Department of Economic Security group home bathroom renovations
  - $74,000 for Department of Environmental Quality roof and HVAC system replacement
  - $50,000 for State Schools for the Deaf & the Blind classroom HVAC system replacement
  - $50,000 for Department of Emergency and Military Affairs cooling tower replacement
  - $40,000 for Department of Juvenile Corrections security gate replacement
  - $20,000 for Department of Public Safety cooling tower refurbishment

(Continued)

ADOA did not submit any detail on the scope or cost derivations for the proposed projects in its original request. Subsequently, ADOA submitted additional detail for the above 7 projects with bids that will expire before the Committee meets again in September, or that ADOA deems critical. JLBC Staff will continue working with ADOA to develop a more comprehensive recommendation for the Committee's September meeting.

Analysis

Arizona's Building Renewal Formula takes into consideration a facility's age (adjusted to account for major renovations), replacement value, and expected life in determining a suitable appropriation level for repairs. The formula does not account for any maintenance deferred as a result of insufficient past funding. In FY 2005, the Legislature funded 18% of the formula amount. This figure was 18.5% in FY 2004 and 15% in FY 2003. The FY 2006 Capital Outlay Bill (Laws 2005, Chapter 298) appropriated $3.5 million from COSF to fund 15% of the building renewal formula. COSF derives its monies from rent revenues charged to state agencies in state-owned buildings.

ADOA has allocated $3,285,000 among 24 projects, including $200,000 for project management costs and $800,000 as an emergency contingency. The following provides detail submitted by ADOA for the 7 projects JLBC staff recommends as a favorable review.

<u>Department of Corrections Roof Replacement</u>
Design work for the 8 roofs has already been conducted and roofing work needs to be completed before the winter rainy season begins. A bid has already been issued.

<u>Department of Economic Security Bathroom Renovations</u>
The contractor that completed the ADA renovations at one of the Coolidge group homes is holding a bid for the second building. The bid will expire before September 1. Obtaining bids to work at Coolidge is extremely difficult.

<u>Department of Environmental Quality Roof and HVAC Replacement</u>
The current roof mounted HVAC system at the Emissions Lab and Waiver station has caused a leak in the roof. In conjunction with roof replacement, and to extend the useful life of the new roof, the funding is needed to relocate and replace the HVAC system.

<u>State Schools for the Deaf & the Blind HVAC Replacement</u>
The existing HVAC system is 26 years old and needs replacing. New units need to be installed before school starts in August, in order to avoid having to rent temporary chillers.

<u>Department of Emergency and Military Affairs Cooling Tower Replacement</u>
The cooling tower at the Roosevelt Readiness Center is past its useful life and currently leaks. Replacing the system is expected to increase the efficiency in building maintenance and climate control.

<u>Department of Juvenile Corrections Security Gate Replacement</u>
The current gate is more tan 20 years old. ADOA reports that the existing gate breaks down weekly and replacement parts are unavailable.

(Continued)

Department of Public Safety Cooling Tower Refurbishment

Refurbishing the crime lab cooling tower is DPS's number one priority for major building systems. Proper temperatures in the crime lab are critical to maintaining validity in tests conducted for criminal trials. Improper temperature in the crime lab could result in tests becoming void.

As noted in the recommendation section, ADOA did not provide detail on project scopes and how the cost estimates were developed. As a result, JLBC Staff is recommending a favorable review of $893,000 for the 7 projects which have already been bid or are considered pending emergencies. The JLBC Staff also recommends an additional $82,000 be made available for emergencies that may arise before the Committee's next meeting, at which time JLBC Staff hopes to have a more comprehensive recommendation for the Committee.

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STATE OF ARIZONA

Joint Committee on Capital Review

STATE SENATE

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

HOUSE OF REPRESENTATIVES

DATE: July 14, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Shelli Carol, Fiscal Analyst

SUBJECT: Northern Arizona University – Review of NAU Research Infrastructure Lease-Purchase Projects

Request

A.R.S. § 15-1682.01 requires Committee review of any university projects financed with Certificates of Participation (COP), also known as lease-purchase agreements. Northern Arizona University (NAU) requests Committee review of a New Laboratory Facility and North Campus Research Infrastructure. NAU would finance these projects with a COP issuance not to exceed $44 million.

Recommendation

JLBC Staff recommends favorable reviews of the New Laboratory Facility and North Campus Research Infrastructure with the following standard university financing provisions for each:

- NAU shall report to the Committee before expenditure of any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that <u>do not expand</u> the scope of the project.
- NAU shall submit for Committee review any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that <u>expand</u> the scope of the project. In the case of an emergency, NAU may report immediately on the scope and estimated cost of the emergency rather than submit the item for review. JLBC Staff will inform the university if they do not concur with the emergency nature of the change in scope.
- NAU shall report to the Committee with a comparison between any compliance costs of the Governor's Executive Order 2005-05, concerning energy efficiency, and operating and other savings generated through those efficiencies.
- A favorable review by the Committee does not constitute endorsement of General Fund appropriations for operational costs when the project is complete. These costs should be considered by the entire Legislature through the budget development process.

(Continued)

The NAU New Laboratory Facility and North Campus Research Infrastructure are part of the university research infrastructure lease-purchase plan authorized by the Legislature in 2003. The COP would consist of $33 million for the New Laboratory Facility, $5 million for North Campus Research Infrastructure, and up to $6 million to capitalize interest payments until FY 2008. NAU anticipates selling the COP in July 2005, with a Standard and Poor's AAA credit rating, for a term of 25 years, at an estimated interest rate of 5.75%.

In FY 2008, annual debt service payments of $3.3 million would begin. Of this amount, NAU would pay $3.0 million annually from its $5.9 million appropriation in Laws 2003, Chapter 267 and $0.3 million annually from local university funds. Total debt service would be a projected $79.7 million, of which NAU would pay $72.3 million from its General Fund appropriation and $7.4 million from local funds.

NAU would contract the New Laboratory Facility and North Campus Research Infrastructure using Construction Manager at Risk (CMAR). CMAR defines a guaranteed maximum price, after which the General Contractor must absorb almost all cost increases, except those caused by scope changes or unknown site conditions. Occasionally, in the case of substantial materials price inflation, a university will partially cover higher costs to maintain good contractor relations. The costs for these projects are comparable to other university projects of their respective scopes.

A.R.S. § 15-1683 allows each state university to incur projected annual debt service for bonds and certificates of participation of up to 8% of each institution's total projected annual expenditures. This calculation is known as the debt ratio. These projects would increase the NAU debt ratio from 4.8% to 5.5%.

NAU estimates new operating and maintenance costs of $625,000 for the New Laboratory Facility and $125,000 for North Campus Research Infrastructure. NAU has stated its intention to request legislative appropriations to support these expenses, but is prepared to make payments from indirect cost recovery and other local university resources.

Analysis

NAU submitted the New Laboratory Facility and North Campus Research Infrastructure as research infrastructure projects. A.R.S. § 15-1670 defines research infrastructure as "installations and facilities for continuance and growth of scientific and technological research activities at the university." Laws 2003, Chapter 267 amended A.R.S. § 42-5075 to confer tax-exempt status on the proceeds and income of research-infrastructure-related construction contracts, with the intent of lowering project costs.

Chapter 267 also appropriates debt service payments from the General Fund between FY 2008 and FY 2031 to support research infrastructure lease-purchases. In exchange, Chapter 267 requires the universities, starting in FY 2008, to deposit into the General Fund a portion of licensing, royalty, and intellectual property income.

Chapter 267 makes an annual General Fund appropriation, from FY 2008 through FY 2031, of $5.9 million to NAU for debt service payments. Given previously reviewed projects and assuming this COP issuance takes place, NAU would have exhausted its research infrastructure capacity. *Table 1* summarizes all NAU research infrastructure projects, including their capital and financing costs.

(Continued)

Table 1

NAU Research Infrastructure Project Summary

Project	Committee Review	Total Project Finance Cost	Annual Debt Service	Total Debt Payments
College of Engineering and Technology Renovation	June 2004	$ 15,000,000	$ 1,311,600 2\	$ 31,478,400 2\
Applied Research and Development Facility	June 2004	18,000,000 1\	1,576,000 2\	37,824,000 2\
New Laboratory Facility	June 2005	33,000,000	2,573,300 3\	61,759,200 3\
North Campus Research Infrastructure	June 2005	5,000,000	439,100	10,538,400
Total		**$ 71,000,000**	**$ 5,900,000**	**$141,600,000**

1\ The total cost of this project was $20.5 million. However, a U.S. Department of Commerce grant funded $2.5 million of those expenses.
2\ NAU has updated these amounts since Committee review to reflect the actual terms of the COP issuance.
3\ These amounts do not include additional debt service of $310,000 annually, or $7,440,000 in total, paid with local NAU funds.

New Laboratory Facility

NAU would construct a 3 story, 80,000 square-foot New Laboratory Facility on the north side of campus, adjacent to the existing Chemistry, Physical Sciences, and Biological Sciences buildings, at an estimated cost of $33 million. The facility would house 23 wet laboratories and their supporting research and instructional spaces.

In accordance with the Governor's Executive Order 2005-05, the New Laboratory Facility would meet the Leadership, Energy, and Environmental Design silver rating. The U.S. Green Building Council publishes this energy-efficiency standard, which also ensures the use of appropriate materials for the colder climate at NAU. To monitor the rate of return for this Executive Order, Staff recommends adding a new standard provision supplying reports to the Committee with comparisons between any compliance costs and operating and other savings generated through energy efficiencies.

NAU estimates the New Laboratory Facility would require 19 months of construction. Upon completion of the project, the majority of wet laboratories from the Chemistry and Biological Sciences buildings would move. NAU would reconfigure the existing Chemistry and Biological Sciences buildings, now over 40 years old and unable to meet current wet laboratory code requirements, for instructional classrooms, as well as faculty and administrative offices. The university would relocate faculty temporarily housed in a converted plant (mechanical systems) building and demolish that facility.

While the university cannot determine the details of these transfers until the New Laboratory Facility is complete, NAU estimates a rough cost between $15 million and $20 million for these transfers. If the Legislature makes no building renewal appropriations, NAU would fund the renovations from locally retained tuition, as available. Tuition collections used for building renewal would be unavailable to support operating expenses and may, therefore, impact the General Fund in the future.

The total cost per square foot for the New Laboratory Facility would be approximately $413 and the direct construction cost per square foot would be $335. These estimates are above the average per-square-foot cost of other Committee-reviewed university research infrastructure projects. However, because wet laboratories require more mechanical systems than other types of construction, Staff believes the per-square-foot costs for the facility are reasonable. *Table 2* compares the costs of university research infrastructure projects.

(Continued)

Table 2

University Research Infrastructure Projects
Estimated Per Square Foot Costs

Project	Total Project Cost	Total Cost Per Square Foot	Direct Construction Cost Per Square Foot
ASU-Interdisciplinary Science and Technology Building 2	$18,000,000	$300	$217
ASU-Interdisciplinary Science and Technology Building 3	12,000,000	305	228
NAU-Applied Research and Development Facility	20,500,000 1\	342	275
AVERAGE		***$384***	***$294***
UA-Thomas W. Keating Bioresearch Building	65,652,000 2\	389	306
UA-Medical Research Building	54,350,000	392	317
ASU-Interdisciplinary Science and Technology Building 1	74,000,000	412	285
NAU-New Laboratory Facility	**33,000,000**	**413**	**335**
ASU-Biodesign Institute, Building B	73,000,000	425	307
UA-Chemistry Building Expansion	46,100,000 3\	507	415

1\ Includes a $2.5 million U.S. Department of Commerce grant.
2\ Includes $5.7 million in federal funds.
3\ Includes $1.1 million from indirect cost recovery and donations.

North Campus Research Infrastructure

NAU would add two water chillers, replace a boiler, and install related piping in and around the existing North Plant Facility to support the utility demands of the New Laboratory Facility and the new Applied Research and Development Facility. The university estimates the project would require 13 months of construction.

These improvements would also allow NAU to redeploy $100,000 to $200,000 in annual operating costs by eliminating 2 stand-alone cooling units, which are less reliable and energy efficient, and a boiler past its useful lifespan. By conducting these installations concurrent with facilities construction, NAU can minimize the costs of materials and trenching.

North Campus Research Infrastructure would provide 2,000 additional tons of chilled water capacity and 45,000 pounds per hour of new steam boiler capacity. Estimates from the Arizona Department of Administration Facilities Management Division indicate that a $5 million cost for this equipment is reasonable.

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STATE OF ARIZONA

Joint Committee on Capital Review

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

DATE: July 14, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Shelli Carol, Fiscal Analyst

SUBJECT: Arizona State University – Review of Infrastructure and Sewer Systems Bond Projects

Request

A.R.S. § 15-1683 requires Committee review of any university projects financed with system revenue bonds. Arizona State University (ASU) requests Committee review of $14 million for Infrastructure Improvements Phase IV and $6 million for a Sewer Systems Expansion. ASU plans to incorporate these initiatives into a $56 million bond issuance in fall 2005, with an anticipated Standard and Poor's credit rating of AAA. This issuance would include projects the Committee has already favorably reviewed, as well as projects the university will submit for review later in the summer. With those final submittals, JLBC Staff will summarize the entire bond issuance.

Recommendation

JLBC Staff recommends favorable reviews for both Infrastructure Improvements Phase IV and the Sewer Systems Expansion project, with the following standard university financing provisions:

- ASU shall report to the Committee before expenditure of any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add alternates that <u>do not expand</u> the scope of the project. ASU shall also report to the Committee before any reallocation exceeding $100,000 among the individual planned improvements or expansions.
- ASU shall submit for Committee review any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add alternates that <u>expand</u> the scope of the project. In case of an emergency, ASU may immediately report on the scope and estimated cost of the emergency rather than submit the item for review. JLBC Staff will inform the university if they do not concur with the emergency nature of the change in scope.
- A favorable review by the Committee does not constitute endorsement of General Fund appropriations to offset any tuition collections or auxiliary revenues that may be required for debt service, or any operations and maintenance costs when the project is complete. These costs should be considered by the entire Legislature through the budget development process.

(Continued)

Table 1 summarizes the two projects and their associated financing costs. Since each initiative has a different useful life span, each associated bond series has its own term and interest rate.

Table 1

ASU New System Revenue Bond Project Financing Costs

Project	Infrastructure Improvements Phase IV	Sewer Systems Expansion	Total
Bond Term (years)	20	30	
Bond Interest Rate	5.0%	6.0%	
Total Project Cost	$14,000,000	$ 6,000,000	$20,000,000
Annual Debt Service			
Tuition Collections	842,500	109,000	951,500
Auxiliary Revenues	280,900	326,900	607,800
Total Annual Debt Service	***$ 1,123,400***	***$ 435,900***	***$ 1,559,300***
Total Debt Payments	$22,468,000	$13,077,000	$35,545,000

A.R.S. § 15-1683 allows each state university to incur a projected annual debt service for bonds and certificates of participation of up to 8.0% of each institution's total projected annual expenditures. This calculation is known as the debt ratio. An additional $20 million in system revenue bonds would increase the ASU debt ratio from 4.8% to 4.9%.

Tuition collections and auxiliary revenues used for debt service would be unavailable to support operating expenses and may, therefore, impact the General Fund in the future. University auxiliary revenues derive from enterprises including student housing, bookstores, student unions, intercollegiate athletics, and internal operations.

Analysis

With the exception of one portion of Infrastructure Improvements Phase IV (ASU would accomplish Central Plant Improvements through an existing contract with APS), ASU would contract the above bond projects using Construction Manager at Risk (CMAR). In CMAR, a competitively selected General Contractor manages a construction project, including the associated architect and other subcontractors, from design to completion. CMAR defines a guaranteed maximum price, after which the General Contractor must absorb almost all cost increases, except those caused by scope changes or unknown site conditions. Occasionally, in the case of substantial materials price inflation, a university will partially cover higher costs to maintain good contractor relations.

Due to the cancellation of the June 2005 Committee meeting, ASU has stated its intention to commence construction on two components of these projects, the Central Plant Improvements and the Sewer Systems Expansion, prior to Committee review. ASU explained that one month of delay would disrupt research activities and living arrangements, as well as jeopardizing grant funding and housing revenues.

ASU could avoid this problem by building more time into its planning process, recognizing that the Committee may need more than 3 weeks to complete its review. ASU chose to wait until June 6, 1 day before the notice deadline, to provide information on projects that the university apparently could have submitted to the Committee in May. Initial submissions from ASU also tend to lack justifications for project components and cost derivations. To increase the efficiency of the review process, the universities have received a list of informational items that they should include with any request to the Committee.

(Continued)

Infrastructure Improvements Phase IV

Infrastructure Improvements Phase IV would upgrade utilities to support new facilities on the ASU main campus. The university designed Infrastructure Improvements Phase IV to enhance the efficiency of utility distribution towards the university's energy reduction goals.

ASU plans to issue system revenue bonds with a 20-year term at an estimated interest rate of 5%. Annual debt service would be approximately $1,123,400, including $842,500 from tuition collections and $280,900 from auxiliary revenues. The total 20-year debt service would be $22.5 million.

Prior to this $14 million phase, the Committee favorably reviewed $22.8 million for 14 Phase I projects at its March 2002 meeting, $10 million for 11 Phase II projects at its August 2003 meeting, and $7.4 million for 6 Phase III projects at its March 2004 meeting. ASU anticipates Infrastructure Improvements Phase IV would have a direct construction cost of $11.7 million, management and architectural fees of $1.6 million, and a $0.7 million contingency fund. The university anticipates completing the upgrades over a 31-month period. Upon project completion, ASU estimates new associated operating and maintenance costs of $150,000. The university has stated its intention to accommodate these expenses from its existing General Fund operations budget.

Table 2 summarizes the capital costs and scopes of the 7 utility extensions.

Table 2

ASU Infrastructure Improvements Phase IV Extension Costs and Scopes

Project	Allocation	Useful Life (Years)	Description
Apache Drive 12" Water Line	$ 65,000	50	Utilities for new McAllister Academic Village
Utility Tunnel Repairs	1,550,000	30	Reinforcements to extend useful life
DPS IT Extension	1,500,000	30	Telecomm and police alarms for new DPS location and South Campus
Campus Research Electric Cogeneration	2,000,000	30	16 MW plant providing electrical redundancy to protect research projects
Central Plant Improvements	4,000,000	30	New 80,000 lb/hr steam boiler and 60,000 lb/hr boiler burner replacement
Campus Research Network Controller	150,000	15	Remote Internet control for building systems
Campuswide IT Extensions	4,735,000	15	Conduits and vaults for voice, data, TV, fire, and building control lines under several campus roads
Total	**$14,000,000**		

Considering generalized estimates from the Arizona Department of Administration Facilities Management Division (ADOA FMD), as well as historical cost information from previous ASU infrastructure improvement components, JLBC Staff believes the Infrastructure Improvements Phase IV budget is reasonable.

Sewer Systems Expansion

The Sewer Systems Expansion would occur along University and McAllister Drives, on the west side of the main ASU campus. The project would support university construction and renovation efforts, including the McAllister Village Residences, Barrett Honors College, South Campus Residence Expansion, Biodesign Institute, and Gateway Development at Tempe Center. The university's current sewer systems are operating at capacity.

(Continued)

ASU plans to issue system revenue bonds with a 30-year term at an estimated interest rate of 6%. Annual debt service would be approximately $435,900, including $109,000 from tuition collections and $326,900 from auxiliary revenues. The total 30-year debt service would be $13.1 million.

ASU anticipates the Sewer Systems Expansion would have a direct construction cost of $4.7 million (including $60,000 for parking and landscaping expenses), management and architectural fees of $0.4 million, and a $0.9 million contingency fund. The university intends to time this construction cycle to coincide with larger City of Tempe infrastructure improvements. As a result, the City would perform the extension work and ASU would avoid some trenching expenses. ASU is still negotiating one of two required Intergovernmental Agreements with the City of Tempe for the sewer work. Therefore, the university could not provide a completion date for the project.

Table 3 summarizes the capital costs and scopes of the 5 expansion components.

Table 3

ASU Sewer Systems Expansion Costs and Scopes

Project	Diameter	Length	Allocation
McAllister Drive	33"	1.0 mi	$2,400,000
University Drive	27"	0.8 mi	2,100,000
Forest Mall	18"	0.1 mi	200,000
Student Recreation Center	21"	0.3 mi	800,000
Associated Connections			500,000
Total			**$6,000,000**

Since each sewer construction project involves unique soil conditions, piping, depth, and layout, it is difficult to make meaningful comparisons. However, generalized estimates from ADOA FMD indicate that a $6 million cost for this project is reasonable.

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STATE OF ARIZONA

Joint Committee on Capital Review

STATE
SENATE

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

HOUSE OF
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DATE: July 14, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Shelli Carol, Fiscal Analyst

SUBJECT: Arizona State University – Review of Revised Project Costs and Scopes

Request

Arizona State University (ASU) requests Committee review of scope and cost revisions for:

- Biodesign Institute, Building B, a university lease-purchase research infrastructure project favorably reviewed by the Committee at its December 2003 meeting
- Academic Renovations and Deferred Maintenance, Phase I, a system revenue bond project favorably reviewed by the Committee at its June 2004 meeting

Both favorable reviews included the provision that scope changes exceeding the greater of $100,000 or 10% of the reported contingency amount totals required additional Committee review.

The total project cost of the Biodesign Institute, Building B is increasing from $73 million to $78.5 million to upgrade security and laboratory technologies. Meanwhile, ASU seeks to cancel certain items associated with Academic Renovations and Deferred Maintenance, Phase I, replacing them with jobs addressing elevator code compliance and academic department growth.

Recommendation

JLBC Staff recommends favorable reviews of the scope and cost revisions for both projects, with the following standard university financing provisions and one special provision:

- ASU shall submit for Committee review an allocation plan for the remaining $1.8 million associated with Academic Renovations and Deferred Maintenance, Phase I before expending those funds.

(Continued)

- ASU shall report to the Committee with a comparison between any compliance costs of the Governor's Executive Order 2005-05, concerning energy efficiency, and operating and other savings generated through those efficiencies.
- ASU shall report to the Committee before expenditure of any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that <u>do not expand</u> the scope of the project. ASU shall also report to the Committee before any reallocation exceeding $100,000 among the individual planned renovations.
- ASU shall submit for Committee review any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that <u>expand</u> the scope of the project. In case of an emergency, ASU may immediately report on the scope and estimated cost of the emergency rather than submit the item for review. JLBC Staff will inform the university if they do not concur with the emergency nature of the change in scope.

Analysis

ASU would contract these scope revisions using Construction Manager at Risk (CMAR). In CMAR, a competitively selected General Contractor manages a construction project, including the associated architect and other subcontractors, from design to completion. CMAR defines a guaranteed maximum price, after which the General Contractor must absorb almost all cost increases, except those caused by scope changes or unknown site conditions. Occasionally, in the case of substantial materials price inflation, a university will partially cover higher costs to maintain good contractor relations.

Due to the cancellation of the June 2005 Committee meeting, ASU has stated its intention to commence construction on the Biodesign Institute, Building B scope changes and several new components of Academic Renovations and Deferred Maintenance, Phase I prior to Committee review. ASU explained that one month of delay would cause code violations and disrupt academic and research activities, increasing costs and possibly jeopardizing the accreditation of its Child Study Lab.

ASU could avoid this problem by building more time into its planning process, recognizing that the Committee may need more than 3 weeks to complete its review. ASU chose to wait until June 6, 1 day before the notice deadline, to provide information on projects that the university apparently could have submitted to the Committee in May. Initial submissions from ASU also tend to lack justifications for project components and cost derivations. To increase the efficiency of the review process, the universities have received a list of informational items that they should include with any request to the Committee.

<u>Biodesign Institute, Building B</u>

A.R.S. § 15-1682.01 requires Committee review of any university projects financed with Certificates of Participation, also known as lease-purchase agreements. The Committee favorably reviewed the Biodesign Institute, Building B at its December 2003 meeting. At that time, the estimated cost of the project was $73 million.

ASU is constructing 142,000 square feet of bioengineering, biotechnology, and integrative biomedicine laboratories (including an animal care facility), as well as 30,000 square feet of faculty,

(Continued)

research, and administrative office space. As ASU hires Biodesign Institute faculty, they are clarifying laboratory, technology, and security needs for the building. The university intends to complete $5.5 million of upgrades concurrent with the larger construction process, to maximize economies of scale. These scope changes would delay completion of the facility by one month, to October 2005.

The additional project costs consist of $4.0 million for laboratory upgrades, $0.6 million for security upgrades, and $0.9 million for additional furniture, fixtures, and equipment. ASU would fund this $5.5 million increase from locally retained tuition, indirect cost recovery, and other local university funds. ASU also estimates that the increased operating and maintenance demands of the upgrades would raise these annual costs by $0.4 million to $2.1 million. Upon project completion, indirect cost recovery would fund all these operations and maintenance expenses.

The revised cost per square foot for this project is $456 (originally $425) and the revised direct construction cost per square foot is $320 (originally $299). These estimates are above the average per-square-foot cost of other Committee-reviewed university research infrastructure projects. However, because wet laboratories require more mechanical systems than other types of construction, JLBC Staff believes the per-square-foot costs for the facility are reasonable.

Academic Renovations and Deferred Maintenance, Phase I

A.R.S. § 15-1683 requires Committee review of any university projects financed with system revenue bonds. The Committee favorably reviewed Academic Renovations and Deferred Maintenance, Phase I at its June 2004 meeting.

At that time, ASU planned to renovate 11 buildings, covering approximately 75,000 square-feet, at an estimated total cost of $10 million. Typical building renewal categories are fire and life safety improvements, preservation of assets, and critical repairs for continued operation of existing programs. Typical building renewal projects include replacement of utility distribution systems; Heating, Ventilating, Air Conditioning (HVAC) systems; and roofs. All 11 buildings required major renovations and some violated life safety codes.

In the interim, the Arizona State Industrial Commission's Elevator Safety Division published code revisions that require modifications to many university elevators. To reduce costs and maximize efficiencies, ASU plans to conduct all needed elevator upgrades and deferred maintenance at one time, at a cost of around $3.0 million. In addition to the elevator work, the university prioritized 6 new renovations relating to academic program growth, with projected expenses of $2.9 million.

As a result, ASU intends to cancel 7 previously reviewed renovations with combined costs of $7.7 million. Since most of these renewals included life safety components, the university is incorporating some into future renovation projects and evaluating other funding sources, most likely locally retained tuition, for the rest. Although ASU has not yet identified the remaining Phase I renovations, the university anticipates that its known scope changes would delay completion of the facility by 3 months, to November 2006.

The combination of new and cancelled renovations has resulted in an uncommitted $1.8 million from the original $10 million system revenue bond issuance. Therefore, JLBC Staff recommends that ASU submit for Committee review an allocation plan for the remaining monies before expending those funds.

(Continued)

Academic Renovations and Deferred Maintenance, Phase I, as revised, would renovate approximately 44,800 square feet in 9 buildings. *Table 1* summarizes the status, estimated capital costs, and scopes of both the previously reviewed and newly proposed renovations.

Table 1

ASU Academic Renovations and Deferred Maintenance Phase I Status, Costs, and Scope

Building	Request	Ext. Structure	Int. Structure	Air	Plumbing	Electric	Safety
Continuing Projects							
University Archives	$1,200,000	X	X	X	X	X	X
Psychology Floors 2 & 3	716,000		X			X	
Armstrong Hall	363,000		X		X	X	
Continuing Subtotal	*$2,279,000*						
Planned Projects							
Campuswide Elevators	$3,020,000		X				
East Engineering Labs	1,100,000	X	X	X	X	X	
Social Sciences	362,500		X				
Language & Literature	362,500		X				
Ceramics Relocation	250,000		X				
Psychology Floor 1	545,400		X				X
East Flight Simulator	291,800	X	X	X	X	X	_
Planned Subtotal	*$5,932,200*						
Uncommitted Funds	*$1,788,800*						
Construction Total	**$10,000,000**	**3**	**10**	**3**	**4**	**5**	**2**
Cancelled Projects							
Payne Hall	$1,600,000	X	X	X	X	X	
Nursing	1,500,000	X	X	X	X	X	X
Farmer Education	1,300,000	X	X	X	X	X	X
Dixie Gammage Hall	960,000	X	X	X	X	X	X
Durham Language	884,000	X	X	X	X	X	
Schwada Classroom Office	800,000	X	X	X	X		X
Wilson Hall	668,000	X	X	X	X	X	X
Cancelled Total	**$7,712,000**	**7**	**7**	**7**	**7**	**6**	**5**
Locally Retained Tuition							
Ross-Blakely Law Library	$40,000		X				

These scope changes have resulted in $26,000 of new operations and maintenance costs, which ASU would absorb within its existing budgets. The revised total cost per square foot for this project would be approximately $183 (originally $133) and the direct construction cost per square foot would be $140 (originally $100). These estimates are above the average per-square-foot cost of other Committee-reviewed university renovation projects.

Since renewal and renovation projects often combine both minor and major work, it is difficult to make meaningful comparisons among them. However, due to the new emphasis on elevator upgrades, JLBC Staff believes the per-square-foot costs for Academic Renovations and Deferred

(Continued)

Maintenance, Phase I are reasonable. *Table 2* compares the costs of some assorted renovation projects.

Table 2

Selected Building Renewal/Renovation Projects
Estimated Per Square Foot Costs

Project	Total Project Cost	Total Cost Per Square Foot	Direct Construction Cost Per Square Foot
ASU-Backfill Space Renovation II	$ 3,800,000	$ 40	$ 24
Treasurer Renovations	360,000	42	34
UA-Residential Life Building Renewal Phase I	8,600,000	61	51
AVERAGE		***$138***	***$106***
NAU-School of Communication Building Renovations	14,020,000	154	131
ASU-Academic Renovations & Deferred Maintenance Phase I	**10,000,000**	**183**	**140**
ASU-Instruction/Research Laboratory Renovations Phase I	10,000,000	238	213
ASU-Instruction/Research Laboratory Renovations Phase II	11,447,000	293	185

Comments: Costs are not adjusted for general or materials inflation.

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STATE OF ARIZONA

Joint Committee on Capital Review

STATE SENATE

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

HOUSE OF REPRESENTATIVES

DATE: July 15, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Shelli Carol, Fiscal Analyst

SUBJECT: Arizona State University – Review of Revised Scopes for Laboratory Renovations

Request

Arizona State University (ASU) requests Committee review of scope revisions for Instructional/Research Laboratory Renovations Phases I and II, system revenue bond projects favorably reviewed by the Committee at its December 2003 and September 2004 meetings, respectively. Both favorable reviews included the provision that scope changes exceeding the greater of $100,000 or 10% of the reported contingency amount totals required additional Committee review.

The total project costs for Instructional/Research Laboratory Renovations Phases I and II remain the same. Due to evolving academic program priorities, however, ASU seeks to cancel certain items, change the scope of others, and introduce new components associated with each project.

Recommendation

JLBC Staff recommends favorable reviews of the scope revisions for both projects, with the following standard university financing provisions and one special provision:

- ASU shall submit for Committee review an allocation plan for the remaining $1.6 million associated with Instructional/Research Laboratory Renovations Phase II before expending those funds.
- ASU shall report to the Committee with a comparison between any compliance costs of the Governor's Executive Order 2005-05, concerning energy efficiency, and operating and other savings generated through those efficiencies.

(Continued)

- ASU shall report to the Committee before expenditure of any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that do not expand the scope of the project. ASU shall also report to the Committee before any reallocation exceeding $100,000 among the individual planned renovations.
- ASU shall submit for Committee review any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that expand the scope of the project. In case of an emergency, ASU may immediately report on the scope and estimated cost of the emergency rather than submit the item for review. JLBC Staff will inform the university if they do not concur with the emergency nature of the change in scope.

Summary

- Changes to Phase I would reallocate $640,000 for 3 new laboratory renovations.
- Changes to Phase II would cancel 5 existing components and allocate $9.2 million for 11 new laboratory renovations.
- The per-square-foot costs of the renovations are above those of other recent state renovation projects, but appear reasonable in light of specialized laboratory needs.

Analysis

Almost all the components of Instructional/Research Laboratory Renovations Phases I and II address laboratory upgrades to meet the needs of program growth and new faculty researchers. According to ASU, many of its laboratories are out of date and in danger of code violations. They do not support instructional and research requirements and are inadequate to handle state-of-the-art technologies. The renovations would include infrastructure improvements and construction of additional research space.

ASU is conducting as many of these renovations as possible during the summer, when most campus spaces are unoccupied. In situations when construction occurs during the school year, contractors operate largely before and after normal class/work hours, as well as on weekends, to minimize operational and academic disruptions.

ASU would contract these scope revisions using Construction Manager at Risk (CMAR). In CMAR, a competitively selected General Contractor manages a construction project, including the associated architect and other subcontractors, from design to completion. CMAR defines a guaranteed maximum price, after which the General Contractor must absorb almost all cost increases, except those caused by scope changes or unknown site conditions. Occasionally, in the case of substantial materials price inflation, a university will partially cover higher costs to maintain good contractor relations.

Table 1 compares the revised per-square-foot costs of Instructional/Research Laboratory Renovations Phases I and II to those of some selected renovation projects. *Table 1* does not adjust earlier project costs for general or materials inflation. In the past few years, however, materials costs have risen markedly due to increasing worldwide demand.

(Continued)

Table 1

Selected Building Renewal/Renovation Projects
Estimated Per Square Foot Costs

Project	Total Project Cost	Total Cost Per Square Foot	Direct Construction Cost Per Square Foot
ASU-Backfill Space Renovation II	$ 3,800,000	$ 40	$ 24
Treasurer Renovations	360,000	42	34
UA-Residential Life Building Renewal Phase I	8,600,000	61	51
ASU-Academic Renovations & Deferred Maintenance Phase I	10,000,000	133	100
AVERAGE		***$ 137***	***$ 105***
NAU-School of Communication Building Renovations	14,020,000	154	131
ASU-Instruction/Research Laboratory Renovations Phase I	**10,000,000**	**229**	**203**
ASU-Instruction/Research Laboratory Renovations Phase II	**18,438,000**	**307**	**190**

Comments: Costs are not adjusted for general or materials inflation.

Instructional/Research Laboratory Renovations Phase I

A.R.S. § 15-1683 requires Committee review of any university projects financed with system revenue bonds. The Committee favorably reviewed Instructional/Research Laboratory Renovations Phase I at its December 2003 meeting. That review included the provision that ASU report to the Committee on the scope of work and estimated cost for each building prior to starting any construction.

In June 2004, ASU provided the required report. Total funding remained the same, but the university reallocated monies among some of the projects, resulting in an unallocated amount of $1.7 million. ASU reported in September 2004 on the allocation of the remaining amount. The first complete allocation planned to renovate 10 buildings, encompassing approximately 42,100 square-feet, at an estimated total cost of $10 million.

Of the original 10 components, ASU is using locally retained tuition to fund 3 of the smaller items, is completing 1 item under budget, and would move another item into the Instructional/Research Laboratory Renovations Phase II project. These requested changes would free $640,000 of the project budget, which ASU would reinvest in 3 new laboratory upgrades. *(See attached schedules from ASU.)* Therefore, the modified scope of Instructional/Research Laboratory Renovations Phase I would be 43,600 square feet, with a direct construction cost of $8.8 million.

The revised total cost per square foot for this project would be approximately $229 (originally $238) and the direct construction cost per square foot would be $203 (originally $213). As *Table 1* above shows, these estimates exceed the average per-square-foot cost of other Committee-reviewed renovation projects. However, the revised unit costs are below those from the original Committee review of this project.

Since renewal and renovation projects often combine both minor and major work, it is difficult to make meaningful comparisons among them. However, because these renovations include significant purchases of laboratory equipment, JLBC Staff believes the per-square-foot costs for Instructional/Research Laboratory Renovations Phase I are reasonable.

The scope changes discussed above would not result in any new operations or maintenance costs. Furthermore, the project remains on schedule for completion in summer 2006.

(Continued)

Instructional/Research Laboratory Renovations Phase II

A.R.S. § 15-1683 requires Committee review of any university projects financed with system revenue bonds. The Committee favorably reviewed Instructional/Research Laboratory Renovations Phase II at its September 2004 meeting. ASU planned 14 renovations, encompassing at least 33,200 square feet, at an estimated total cost of $11.4 million.

At the time, ASU issued $20 million in bonds, to provide future debt capacity for laboratory renovations. The Committee's favorable review included the provision that ASU submit for Committee review an expenditure plan for the remaining $8.6 million of Phase II, including scope of work and estimated cost for each building, prior to starting any construction with those monies.

Of the original 14 components, ASU now seeks to cancel 5 and modify the budgets and scopes of another 6. Additionally, ASU is proposing 11 new projects with total costs of approximately $9.2 million. *(See attached schedules from ASU.)* Therefore, the revised scope for Instructional/Research Laboratory Renovations Phase II would be around 60,000 square feet, with total expenses of $18.4 million and a direct construction cost of $11.4 million.

Table 2 summarizes the updated cost and square footage of each proposed component for Instructional/Research Laboratory Renovations Phase II.

Table 2

ASU Instructional/Research Laboratory Renovations Phase II
Updated Costs and Square Footage

Project	Request	Sq-Ft
Unchanged Projects		
Engineering Code Upgrades Phase II	$ 2,600,000	N/A*
Life Science A-Wing & C-Wing	475,000	1,300
Modified Projects (see attached ASU schedules for detail)		
East Field Lab Facility	988,300	4,460
Electronic Door Lab Security	400,000	N/A*
Goldwater Computing Center	800,000	1,500
Goldwater WINtech Center	460,000	1,400
Engineering G-wing	1,200,000	8,000
Physical Science C-wing	1,175,000	2,033
Physical Science D-wing	1,188,000	3,270
New Projects (see attached ASU descriptions)		
ISTB I CLAS Renovations	1,700,000	5,350
LS E-Wing Mass Spectrometry Labs	300,000	1,840
School of Human Evolution	2,000,000	5,328
Psychology 3rd Floor Renovations	853,000	2,140
Physical Science B-Wing Renovations	250,000	2,060
SCOB [FSE Geography Trade]	332,000	4,000
ISTB I Engineering Renovations	1,200,000	3,400
Kavazajian Renovations	150,000	1,400
Whitaker Design Center Studio	865,000	4,250
Engineering A & B-Wing Labs	1,310,400	6,300
Data Center Cooling Upgrades, Phase II	191,400	1,955
TOTAL	**$18,438,100**	**59,986**

* These projects, by nature, occur in multiple areas of campus. ASU cannot determine square footage.

(Continued)

The new total cost per square foot for Phase II would be approximately $307 (originally $293) and the direct construction cost per square foot would be $190 (originally $185). These estimates represent a direct construction expense increase of around 3% and a total cost increase of 5%. As *Table 1* above shows, this revised direct construction cost per square foot exceeds the average, while the total cost per square foot exceeds the total per-square-foot expense of all other Committee-reviewed renovation projects.

Since renewal and renovation projects often combine both minor and major work, it is difficult to make meaningful comparisons among them. However, because these renovations include significant purchases of laboratory equipment, JLBC Staff believes the direct construction per-square-foot costs for Instructional/Research Laboratory Renovations Phase II are reasonable.

At the same time, indirect project expenses, totaling $7 million, are causing the high total cost per square foot in Phase II. ASU explains that these indirect expenses include a large contingency amount, over 18% of the total project cost. The university justifies this contingency fund, not only to cover standard unknowns, but also to prepare for the specific complexities of laboratory renovations. As ASU hires researchers, it must tailor facilities to meet their needs. These modifications, in turn, translate into specialized mechanical system upgrades necessary to align laboratory conditions with code requirements, especially air handling requirements.

Therefore, JLBC Staff believes that a large contingency fund is reasonable for Instructional/Research Laboratory Renovations Phase II. The monies would reduce the possibility of future escalations in the total project cost. However, with the higher contingency amount, the Committee can expect more reports on contingency allocations, as the standard university financing provisions require.

Furthermore, ASU has still not allocated $1.6 million of the original $20 million bonding amount. Therefore, JLBC Staff recommends an additional provision that ASU submit for Committee review its plan for the remaining monies before expending those funds.

Instructional/Research Laboratory Renovations Phase II now includes $473,000 for new laboratory equipment to meet known research needs. The scope changes discussed above would not result in any new operations or maintenance costs. Furthermore, Phase II is still on schedule for completion in summer 2006.

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STATE OF ARIZONA

Joint Committee on Capital Review

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

DATE: July 14, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Shelli Carol, Fiscal Analyst

SUBJECT: University of Arizona – Review of New System Revenue Bond Capital Projects

Request

A.R.S. § 15-1683 requires Committee review of any university projects financed with system revenue bonds. The University of Arizona (UA) requests Committee review of a new $6.8 million Poetry Center, a new $9.4 million Architecture Building Expansion, a $6.5 million second phase of Residence Life Building Renewal, and a $20.0 million Deferred Renovation plan. UA would finance these projects with a total new revenue bond issuance of $40.4 million and $2.3 million from private donations.

Recommendation

Per-square-foot costs for the Poetry Center are significantly higher than those of similar projects. UA defends the high costs as necessary for improvements to attract donations. The university has already collected $3.7 million of gifts and, by the end of summer, expects over $1.2 million in grants for this $6.8 million project. The Committee has, at least, the following options:

- A favorable review, with the standard university financing provisions (listed below).
- An unfavorable review, since UA has essentially raised $4.9 million of the $6.8 million cost of the center and could pay cash for construction, foregoing debt, by raising another $1.9 million in donations.

Meanwhile, JLBC Staff recommends favorable reviews of all other projects associated with this bond issuance, with the following standard university financing provisions for each:

- UA shall report to the Committee with a comparison between any compliance costs of the Governor's Executive Order 2005-05, concerning energy efficiency, and operating and other savings generated through those efficiencies.

(Continued)

- UA shall report to the Committee before expenditure of any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that do not expand the scope of the project. UA shall also report to the Committee before any reallocation exceeding $100,000 among the individual planned renovations, renewals, or extensions.
- UA shall submit for Committee review any allocations that exceed the greater of $100,000 or 10% of the reported contingency amount total for add-alternates that expand the scope of the project. In case of an emergency, UA may immediately report on the scope and estimated cost of the emergency rather than submit the item for review. JLBC Staff will inform the university if they do not concur with the emergency nature of the change in scope.
- A favorable review by the Committee does not constitute endorsement of General Fund appropriations to offset any tuition collections, auxiliary revenues, or donations that may be required for debt service, or any operations and maintenance costs when the project is complete. These costs should be considered by the entire Legislature through the budget development process.

UA anticipates issuing the system revenue bonds in fall 2005, with a Standard & Poor's AAA credit rating, for a term of 25 years, at an estimated interest rate of 6.0%. Total annual debt service would be approximately $3.2 million, paid from tuition collections, auxiliary revenues, and donations. The total 25-year debt service would be $80.7 million. Tuition collections and auxiliary revenues used for debt service would be unavailable to support operating expenses and may, therefore, impact the General Fund in the future.

Furthermore, UA estimates that, upon completion, the Poetry Center and Architecture Building Expansion projects would require new operating and maintenance costs of almost $400,000. UA intends to request legislative appropriations to support these new costs, but is prepared to make payments from tuition collections and other local university resources.

Table 1 summarizes these 4 projects and their associated capital and operational costs.

Table 1

UA New System Revenue Bond Project Financing Costs

Project	Poetry Center	Architecture Building Expansion	Residence Life	Deferred Renovation	Total
Project Financing					
System Revenue Bonds	$ 5,800,000	$ 8,100,000	$ 6,500,000	$20,000,000	$40,400,000
Donations	1,000,000	1,300,000	0	0	2,300,000
Total Project Cost	***$ 6,800,000***	***$ 9,400,000***	***$ 6,500,000***	***$20,000,000***	***$42,700,000***
Annual Debt Service					
Tuition Collections	152,500	648,000	0	1,593,000	2,393,500
Auxiliary Revenues	0	0	520,000	0	520,000
Donations	312,500	0	0	0	312,500
Total Annual Debt Service	***$465,000***	***$648,000***	***$520,000***	***$1,593,000***	***$3,226,000***
Total Debt Payments	11,625,000	16,200,000	13,000,000	39,825,000	80,650,000
New Operations & Maintenance	127,600	272,100	0	0	399,700

A.R.S. § 15-1683 allows each state university to incur a projected annual debt service for bonds and certificates of participation of up to 8.0% of each institution's total projected annual expenditures. This calculation is known as the debt ratio. The $40.4 million system revenue bond issuance would increase the UA debt ratio from 4.1% to 4.3%.

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Analysis

With the exception of the Deferred Renovation initiative, UA would contract these bond projects using Construction Manager at Risk (CMAR). In CMAR, a competitively selected General Contractor manages a construction project, including the associated architect and other subcontractors, from design to completion. CMAR defines a guaranteed maximum price, after which the General Contractor must absorb almost all cost increases, except those caused by scope changes or unknown site conditions. Occasionally, in the case of substantial materials price inflation, a university will partially cover higher costs to maintain good contractor relations. UA would accomplish the Deferred Renovations through a combination of CMAR, Job Order Contracting, and traditional bidding.

Non-Research Capital Projects

Table 2 compares the per-square-foot costs of the Poetry Center and Architecture Building Expansion to those of other university non-research-related capital projects. *Table 2* does not adjust earlier project costs for general or materials inflation. In the past few years, however, materials costs have risen markedly due to increasing worldwide demand.

Table 2

Assorted University Non-Research Capital Projects
Estimated Per Square Foot Costs

Project	Review Date	Total Project Cost	Total Cost Per Square Foot	Direct Construction Cost Per Square Foot
ASU-Mediated Classroom & Social Sciences Building	Mar 2002	$58,700,000	$212	$138
NAU-New College of Business	Nov 2003	22,000,000	220	182
AVERAGE			***$228***	***$155***
ASU-Memorial Union Expansion	Mar 2002	38,830,000	251	146
UA-Architecture Building Expansion	**Jun 2005**	**9,400,000**	**281**	**202**
UA-Poetry Center	**Jun 2005**	**6,800,000**	**385**	**286**

Comments: Costs are not adjusted for general or materials inflation.

Poetry Center

The Poetry Center would integrate academic support programs, including the Humanities Seminars Program, outreach activities, the university's entire collection of poetry books, journals, and multi-media materials, and guest accommodations for visiting writers into one 17,650 square-foot facility. The center would include reading areas, office space, meeting rooms, and environmentally controlled closed stacks for the non-circulating special collection. Starting this fall, UA would construct the building over 14 months.

Of the $6.8 million total cost for this project, system revenue bonds would fund $5.8 million, with an additional $1.0 million coming from private donations. Gifts would also fund most of the debt service. UA has already collected $3.7 million in donations for the purpose and expects further grants of over $1.2 million by the end of summer.

The Poetry Center would have a total cost per square foot of $385 and a direct construction cost per square foot of $286. As *Table 2* above illustrates, the magnitude of these expenses, compared to those of other university non-research-related capital projects, is more than materials cost inflation can justify.

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UA explains that the higher costs are partially due to the facility's small size, which prevents economies of scale, as well as to the light, temperature, humidity, and security requirements of the rare book archive. For comparison, the Committee favorably reviewed, in March 2002, a similar Remote Library Storage Facility at Arizona State University. This 15,000 square foot building also provided environmentally controlled storage, but had a total cost per square foot of $187 and a direct construction cost per square foot of $143. Again, JLBC Staff believes that materials price inflation can justify part, but not all of the difference in per-square-foot costs.

UA defends the higher costs as necessary for improvements to the Poetry Center design, which attracted further donations. The Committee has the option of an unfavorable review.

UA demolished the original Poetry Center to make room for the growth of its campus research corridor, and then housed the Poetry program in temporary space on-campus. Additionally, parts of the poetry collection are currently in university storage off-campus. When the Poetry Center vacates its current temporary facility, the space will accommodate the growth of other UA programs.

Architecture Building Expansion

The Architecture Building Expansion would add 33,500 square feet to the existing building, including a centralized collaborative studio and new office space. The addition would allow the College of Architecture and Landscape Architecture (CALA) to consolidate its faculty and students, currently located in several non-adjacent facilities, into one site. Starting this fall, UA would construct the building over 17 months.

Of the $9.4 million total cost for this project, system revenue bonds would fund $8.1 million, with an additional $1.3 million coming from private donations. The Architecture Building Expansion would have a total cost per square foot of $281 and a direct construction cost per square foot of $202. As *Table 2* above illustrates, these expenses are somewhat higher than other university non-research-related capital project expenditures. However, considering the materials price inflation discussed previously, the proposed Architecture Building Expansion budget is reasonable.

Upon consolidation of CALA faculty and students in the new extension, UA would use some of the non-adjacent facilities as overflow space for other academic programs and demolish others to create more parking.

Building Renewal Projects

State agencies normally fund on-going routine maintenance and minor repairs to existing facilities through their operating budgets. ABOR policy requires the universities to request Legislative appropriations for building renewal. The university system has not received any state funding for building renewal since FY 2001. Full annual funding of the building renewal formula in FY 2006 would have provided $31.0 million for UA.

Residence Life Building Renewal, Phase 2

Phase 2 of Residence Life Building Renewal would replace plumbing systems in Maricopa and Sonora Halls. UA anticipates these renewals would have a direct construction cost of $5.1 million. The university's preliminary estimate is that replacements would occur over 4 months. System revenue bonds would fund the total $6.5 million cost of this project.

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For comparison, the Committee favorably reviewed Residence Life Building Renewal, Phase 1 in March 2004. This first phase replaced plumbing and electrical systems in the Gila, Yuma, and Arizona residential halls. The plumbing component for those three halls cost approximately $26 per square foot. Meanwhile, Phase 2 plumbing costs for Maricopa and Sonora Halls are around $66 per square foot.

UA explains that Sonora Hall, of comparable size to Arizona Hall, holds a higher density of students and needs disability access modifications. Furthermore, Maricopa Hall, of comparable size to Gila and Yuma Halls, has a less efficient plumbing layout and requires more extensive fixture replacement. Given these differences, JLBC Staff believes the higher Phase 2 costs are reasonable.

Deferred Renovation

The Deferred Renovation project encompasses 22 tasks. *Table 3* summarizes the numbers and cost allocations for each task type.

Table 3

UA Deferred Maintenance Task Costs and Scopes

Task Category	# of Tasks	Direct Construction Cost	Total Allocation
Building Renewal	10	$ 6,775,100	$10,360,000
Building Renovation	3	2,060,000	2,460,000
Utility Extensions / Improvements	4	3,295,000	5,030,000
Surface Infrastructure	5	1,420,500	2,150,000
Total	**22**	**$13,550,600**	**$20,000,000**

The tasks include fire and life safety system upgrades, elevator upgrades in 4 buildings, HVAC upgrades in 17 buildings, IT upgrades, water and electrical distribution extensions, and paving and drainage improvements. UA estimates these renewals would have a direct construction cost of $15.6 million. Starting this fall, the university anticipates completing the jobs over a 4-year period, with most work occurring during academic calendar breaks to minimize disruptions.

System revenue bonds would fund the total $20.0 million cost of this project. The planned Building Renewal jobs have a total cost per square foot of $127 and a direct construction cost per square foot of $83, while the Building Renovations have a total cost per square foot of $47 and a direct construction cost per square foot of $40. Since renewal and renovation projects often combine both minor and major work, it is difficult to make meaningful comparisons among them. However, the above costs are generally in line with prior university renewal and renovation projects.

UA did not supply useful quantities for the Utility Extensions/Improvements or Surface Infrastructure tasks. Therefore, JLBC Staff cannot offer an analysis of the reasonability of those costs.

RS/SC:ym

STATE OF ARIZONA

Joint Committee on Capital Review

STATE SENATE

1716 WEST ADAMS
PHOENIX, ARIZONA 85007

PHONE (602) 542-5491

FAX (602) 542-1616

http://www.azleg.state.az.us/jlbc.htm

HOUSE OF REPRESENTATIVES

DATE: July 14, 2005

TO: Senator Bob Burns, Chairman
Members, Joint Committee on Capital Review

THRU: Richard Stavneak, Director

FROM: Shelli Carol, Fiscal Analyst

SUBJECT: University of Arizona – Reports on Capital Project Contingency Allocations

Request

The University of Arizona (UA) is reporting on contingency allocation changes for three projects. At its September 2003 meeting, the Committee gave a favorable review for the Chemistry Building Expansion, the Medical Research Building, and the Thomas W. Keating Bioresearch Building, all research infrastructure projects. Furthermore, at its June 2004 meeting, the Committee favorably reviewed cost increases and a scope reduction for the Chemistry Building Expansion. With these reviews, the Committee stipulated that UA report on allocations that exceed the greater of $100,000 or 10% of each project's contingency fund amounts.

Recommendation

This item is for information only and no Committee action is required. UA reported previous contingency allocation changes in all these projects, tied to significant cost increases for raw materials, to improvements in laboratory and security technologies, and to unforeseen underground conditions. The newly submitted contingency adjustments reflect faculty research needs and equipment purchases that could not be included in the original project bids.

UA is reallocating $0.2 million of the Chemistry Building Expansion's remaining $1.1 million contingency fund, $2.0 million of the Medical Research Building's remaining $2.2 million contingency fund, and $1.4 million of the Thomas W. Keating Bioresearch Building's remaining $3.6 million contingency fund. As staff previously noted, the amount of specialized laboratory space in the Chemistry Building Expansion has created project costs significantly higher than in other projects of its class. The per-square-foot cost estimates for the Medical Research and Keating Bioresearch Buildings are still reasonable after modification.

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Analysis

The rising costs of materials caused certain laboratory equipment prices to fluctuate when UA originally contracted for the construction of these projects. Therefore, the general contractors were unwilling to incorporate such equipment into the project bids at reasonable prices. To cope with this situation, UA periodically re-bids certain equipment separately, using contingency funds when opportunities arise to make purchases that are more economical.

UA will shift monies from the Chemistry Building Expansion, Medical Research Building, and Thomas W. Keating Bioresearch Building contingency allocations to cover the costs of new equipment and associated mechanical systems modifications. The three individual total budgets remain unchanged from the most recent Committee-reviewed amounts.

The following table shows the total budgets and contingency reallocations for the three projects.

University of Arizona Contingency Reallocations
Total Project Budgets and Revised Costs

Project	Chemistry Building Expansion	Medical Research Building	Thomas W. Keating Bioresearch Building
Total Project Budget	$ 46,100,000 1\	$ 54,350,000	$ 65,652,000
Original Contingency	1,350,000 1\	4,360,000	5,772,000
Previously Reallocated Funds	224,000	2,160,000	2,213,200
Additional Reallocated Funds	160,000	2,000,000	1,370,000
Total Unit Cost	$ 507/sq ft 1\	$ 392/sq ft	$ 389/sq ft
Original Construction Unit Cost	410/sq ft 1\	287/sq ft	285/sq ft
Revised Construction Unit Cost	415/sq ft	317/sq ft	306/sq ft

1\ These amounts represent those favorably reviewed at the June 2004 Committee meeting. The Committee had previously favorably reviewed a total project budget of $45,000,000, with an original contingency of $3,923,000, a total unit cost of $475/sq ft, and an original construction unit cost of $324/sq ft.

Previous Contingency Allocations

While the Committee originally favorably reviewed, in September 2003, a Chemistry Building Expansion of 88,500 square-feet for $45.0 million, at its June 2004 meeting, the Committee favorably reviewed a total project cost increase of $1.1 million, a reallocation of $2.6 million of the project's original $3.9 million contingency fund, and a scope reduction to 85,000 square feet. UA also reported to the Committee at its June 2004 meeting on a $1.5 million reallocation from the Keating Bioresearch Building's original $5.8 million contingency fund. The university reported again to the Committee at its August 2004 meeting on a $1.7 million reallocation of the Medical Research Building's original $4.4 million contingency fund.

This first round of adjustments derived from rising construction expenses. Material costs for such items as steel, cement (concrete), petroleum, copper, and gypsum (drywall) rose above the university's original estimates due to increasing worldwide demand for raw materials, especially from economic growth areas in Asia.

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In September 2004, UA reported to the Committee on a reallocation of an additional $0.5 million of the Medical Research Building's contingency fund and an additional $0.7 million of the Keating Bioresearch Building's contingency fund. These adjustments purchased improved laboratory and security technology. UA aimed, within its approved budget, to acquire the most state-of-the-art equipment available.

Furthermore, at the Committee's October 2004 meeting, UA reported a reallocation of $0.2 million of the Chemistry Building Expansion's revised $1.3 million contingency fund to remove old underground utilities. The university's older infrastructure was not consistently documented and UA could not predict what the contractor might uncover in site preparation.

New Contingency Allocations

As previously noted, UA will use the newly reported contingency allocations to fund faculty research needs and equipment purchases that could not be included in the original project bids.

The following revised excerpts from memos presented to the Committee at its June 2004 and September 2003 meetings reflect the reallocation of contingency funds.

Chemistry Building Expansion

UA will construct 85,000 square feet (originally 88,500 square feet) of expansion space for the Chemistry Building. The expansion will add laboratory and office space, and allow the consolidation of the chemistry research and instructional programs in one area. Additionally, the project is relocating the insectaries and greenhouses from the Chemistry Building to another location on campus. Contingencies have delayed the anticipated completion of the Chemistry Building Expansion by 2 months, until August 2006.

The revised cost per square foot for this project is $507 (originally $475) and the revised direct construction cost per square foot is $415 (originally $324). The square foot costs for this project are higher than costs for other research infrastructure projects the Committee has reviewed. Design and construction costs for building expansions are usually higher than new construction.

Medical Research Building

UA will construct 138,710 square feet of space to provide laboratory, support, and office space for programs related to translational research, as well as to alleviate a shortage of wet laboratory space. Contingencies have delayed the anticipated completion of the Medical Research Building by 3 months, until May 2006.

The cost per square foot for this project is $392 and the direct construction cost per square foot is $317. Based on historical actual costs for similar UA buildings and accounting for unique research design and fixed equipment requirements, the costs per square foot for the project appear reasonable.

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<u>Thomas W. Keating Bioresearch Building (former Institute for Biomedical Science and Biotechnology)</u>

UA will construct 168,640 square feet of space dedicated to molecular life sciences research. Contingencies have delayed the anticipated completion of the Keating Bioresearch Building by 10 months, until October 2006.

The cost per square foot for this project is $389 and the direct construction cost per square foot is $306. Based on market increases for construction materials, UA historical actual costs for similar buildings, unique research design, and fixed equipment requirements, the costs per square foot for the project appear reasonable.

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